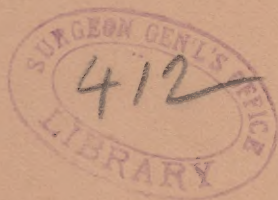


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Physical Training as a
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PHYSICAL TRAINING AS A MEANS OF MENTAL IMPROVEMENT.*

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A prison is in a sense a hospital for the treatment of moral atrophy and disease whose outward and visible manifestation is crime.

The change which has been wrought in prison methods, the abandonment of the idea that punishment deters from the commission of crime, have established to a degree, within certain limits, a parallelism between a hospital for the insane and one for the treatment of the criminal. To both the patient is committed by process of law; and from both (where the indeterminate sentence is in operation) he is returned to society when there is a reasonable probability that being no longer hampered by mental crudeness and moral infirmities he can maintain himself in harmony with and adjustment to society.

The man bereft of reason is secluded, not as a reflection upon his unfortunate mental state which has come to be regarded as a disease, but for the protection of society that he may do no harm to himself or inflict violence upon others, that the disordered condition of the mind may if possible be overcome. The relation society bears to the criminal is primarily self-protection obtained through his seclusion, and secondarily the treatment of the convicted felon and his subjection to influences, chiefly educational, that will modify and correct his abnormal tendencies. In criminality as in insanity the earlier treatment is instituted the more hopeful becomes the prognosis.

It is the individual and not the crime that calls for the most attention. In dealing with the delinquent class the re-formation,

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(reformation is a misleading term and I would that it could be stricken from the vocabulary,) of those who possess criminal tendencies and are susceptible to reformation should be undertaken when the susceptibility to educational influences is the greatest, that is during the plastic period when habits for evil and good are in process of formation. Failing through the utter worthlessness of the material to impress, or from delaying too long until an evil habitude has been established, the habitual delinquent who by his persistent course of outlawry has demonstrated his unfitness and incapacity to properly maintain himself should be taken in charge and dealt with as any other irresponsible, and protection obtained in the seclusion of the aberrant and incapacitation for future criminality by putting him away.

I am of the opinion, and I look for no criticism of the proposition here, that a defect by reason of his deficiencies is, whether he be a mental deficient or moral delinquent, entitled to methods of treatment that will yield the most substantial and satisfactory results in freeing him from the mental and moral embarrassments that rendered him antagonistic to society.

In every correctional institution there is found a class of dullards and illiterates, who as a result of dormant or partially developed faculties and an evil habitude of mind and body, are incapable of prolonged mental application and physical action due to want of self-control arising from mental and moral crudeness.

With such a class prevailing educational measures are unavailing and disappointing. And why. Is it because there is lacking a power of receptivity to impressions from without and an undeveloped nervous system weighted by its own defects? While these conditions may represent a partial cause there is yet another.

In the hurry and anxiety to impress the mental man and touch within the subject a religious chord it would seem as if a fundamental principle of education had been ignored.

You may if you please regard intellection and ethics, mind and morals, as the superstructure of education, and the body the foundation. The plan of the edifice may be comprehensive and imposing, but its stability will depend upon the enduring and resistive power of its foundation, comprised in corporal excellence, the integrity of the various organs of the body, their mutual adjustment to the varying conditions of each other, and the maintaining of their reciprocal relations.

It used to be that the body received attention before the mind.

In these later days the custom has been to cultivate first the mind and afterward repair the body. Now it would seem as if the educational pendulum is swinging back to the heathen plane that physical excellence determines in a measure the quality of intellection.

Four years ago the work of physical training as a pedagogic measure was entered upon at the New York State Reformatory at Elmira. I was at the time ignorant of the comprehensiveness of the scheme of supervised and systematized physical education as carried out in the leading colleges and universities; while in prison methods it was an untraveled field. This departure was brought about through observation based upon experience of the futility of attempting to treat primarily by mental and moral means certain delinquents.

The work was undertaken to ascertain, if possible, if physical training, comprised in frequent baths and massage, a regulated dietary, and directed exercise, would not result in at least a partial awakening and stimulation of dormant mental and moral power. Commenting upon the year's work I said in my annual report: "The class was an experiment from its foundation and no preconceived ideas as to the results to be reached were entertained, or that each dullard by a process of physical gymnastics was to be converted into a scholar. Increased mental activity rather than muscular development was to be the gauge of the success of the experiment or its failure." I am free to confess that the work done in physical training in 1886 was purely experimental, and the class in recognition of this was called the Experimental Class.

We now assume to think we have passed beyond the experimental stage, working to see what results may be; and at the present time, in a positive state of mind, are working to do what the experience and accumulated knowledge of the latter years has emphasized as to the value of physical education as a pedagogic measure for mental and moral ends.

In school and college physical training is employed for recreation, health, and bodily education: we have essayed its application in the treatment of the youthful criminal as contributing to health, intellection, and ethics, that is, morality in all the term implies.

In his work on Idiocy, Dr. Edward Seguin noted, "The beginning of the treatment of each child is where his natural progress stood still." Many a youthful criminal is in arrears corporally as

well as mentally and morally. His corporal architecture is attenuated, assymetrical, and unharmonious. The scheme of his construction is an angular one and not rounded as marks the plan of him, I will not say the perfect man, whose body, mind, and moral sense are in a fair degree of harmony and adjustment.

The criminal should be regarded as a biological study and treated anatomically and physiologically with a view to developing his latent good and minimizing the asserting bad. The treatment should be a reconstructive one beginning with bodily improvement which will contribute to a mental awakening and unfolding that in turn will manifest itself in a quickened moral sense; and not a plan of procedure based upon sentimentalism that begins with mental forcing, followed by an injection of moral platitudes, until a state of satiety and unassimilated morality is established, established early in the treatment because the subject's receptive powers are crude and unavailing. This latter method of treatment has caused many to become skeptical as to the efficacy of education in the treatment of the criminal degenerate because in its application and operation the bad have not all been made good.

The ultimate purpose of the incorporation of physical training in the pedagogic work of the Elmira Reformatory is the moral improvement of the men; a better mental state or condition being indispensable to the attaining of this. That the latter may be obtained it is necessary to institute a process of physical renovation looking to the strengthening of the body as a whole, organically and functionally, correction of errors of nutrition, acceleration of the processes of waste and elimination that tissues well nourished and controlled may replace those that are flaccid and energyless. In short that the subject may be changed from a vegetative creature, one who has merely an existence, to a being possessing a nervous system which, while it may not be sensitive and highly endowed, is yet a step in advance of a rudimentary type.

The elements of physical training are threefold. 1. Free movements and developing apparatus, the gymnastic feature. 2. The bath, including massage. 3. Dietetics.

These three features seem indispensable to a scheme whose object is physical betterment. Their several offices are so related that it is difficult to give prominence to one to even a partial eclipsing of the others.

And first as to the gymnastic phase comprised in free exercises

and the use of the developing apparatus. This is neither a fitting time nor place to draw comparisons as to so-called systems. I will say, however, that rather than abandon physical education in the treatment of the class of boys and youths to whom I have applied it, I would be willing to relinquish the improved facilities and surroundings that it has been possible to acquire and return to a prison corridor as an exercising room, and exercises without apparatus performed under competent guidance.

The effects of free movements are felt beyond the muscular development they occasion and the improved carriage and bearing they confer. While these are important, they must not be regarded as the sole objects of this variety of work. Beginning with the simplest exercises, in every case adapting the work to the physical requirements and mental calibre of the subject, and in occasional instances as has been done, stitching a piece of brightly colored cloth to the coat sleeve that right and left might be differentiated, and carrying the movements progressively forward until complex ones involving the use in rapid succession of various and antagonizing muscles add a mental drill to a physical setting up. Rapidity of thought and action is conferred, the ear trained till it can more than appreciate a sound, and a stimulus applied through the sense of hearing in the form of a command, is conveyed to its proper nervous area, where in rapid succession it is formulated and analyzed to express itself without hesitation and stammering in coördinated and rythmical movements. Free exercises tend to habits of obedience and the formation of the habitude of self-control, marking the first step in the lesson of unquestioned acquiescence to higher power than individual promptings.

I am frequently asked if the men receiving physical training enjoy the same. My reply has been they were not selected to be so treated for their enjoyment. When it can be done a healthy competition is permitted; but mere enjoyment, the doing for the pleasure it affords, is not considered. These same men do not enjoy labor, or school, or the plain substantial fare afforded them, but no one questions the benefits they confer.

The developing apparatus, the chest weights, quarter circle, inclined plane, neck, arm, finger, wrist, and ankle machine, are valuable as a means of developing individual muscles and groups. In addition the effect upon the men of apparatus that can be seen, felt, and handled, is good. Their dull minds do not comprehend the underlying principles governing free movements which seem to

them to be an expenditure of force without a recompense, a nothing for something; but employ tangible means and in a manner they understand. Apparatus is to them a "muscle raiser" and a thing to be seized and grappled with that they may acquire additional strength. The flying and traveling rings, the horizontal and parallel bars, the vaulting bar and jumping board, become instruments of healthy competition, inciting each to a performance equal to his neighbor's, overcoming apathy and indifference by substituting self-reliance and a consciousness of ability in hitherto unsuspected lines.

The men are weighed and measured from time to time; primarily to note the points of least resistance and organs most susceptible to the invasion of disease, and secondarily to determine the degree of susceptibility to reconstructive measures.

Recognizing the law of a natural limitation as applying to every individual, the results sought have not been the development of all to a common plane, but rather systemic accretion and extension together with an improved nutrition according to the necessities of each.

In the treatment of the men to whom physical training is applied tub-bathing has been discontinued and the dry vapor or Turkish bath substituted. The former contributes to cleanness, but its effects are not so far reaching and comprehensive as those of the latter, whose functions transcend cleanliness as it is commonly understood, that is, the absence of manifest dirt.

The three stages of the Turkish bath, the sweating, shampooing and massage, and the final cooling, resolve themselves into a therapeutic measure contributing to an increase of systemic energy.

The effect upon the cutaneous system is the rapid and continuous elimination of effete and poisonous matter and a raising to the highest degree of functional activity and structural excellence one of the chief eliminating organs. The circulatory, glandular, and nervous systems are likewise impressed. A combining of heat and shampooing, the latter now termed massage, supplies and makes good the waste of fluids occasioned by the former, causing the cutaneous system of blood vessels to draw upon internal trunks, abdominal, thoracic, and cerebral, and tending to relieve areas of localized congestion. The massage builds up and strengthens muscles, rousing to action weak and torpid organs, and as has been said, "restores the balance in obstructive disorders, and promotes secretion and absorption. With each muscle, nerve,

and blood vessel thus stimulated, the results are greater tone and vigor." No one will question the effects upon nutrition of the exalted condition of the circulatory, glandular, and nervous systems, and from the stimulation they receive their augmented power to mutually support and sustain each other.

It falls to you rather than to me to note the degree of influence upon the central nervous system, upon their individual cellular elements, of stimulation of peripheral nerves by heat and massage.

I attach importance to the plunge-bath as a reactionary measure and for the opportunity it affords for swimming, a form of exercise to be commended as a general muscle drill.

The benefits conferred by the bath have related it to the gymnasium as is the study-hall of school to recitation room.

The question of dietetics has been to me the most perplexing of all relating to physical training. Food has been defined as—"Any substance which, when introduced into the living organism, can minister to the maintenance of its structure and its activities; and a perfect and complete food for any living body will be one which comprises all the elements which enter into the composition of the tissues, juices, and secretions of the body, as well as those which are needed for the maintenance of the chemical changes connected with its functional activity."

The popular conception of a food is rather that of a fuel for purposes of combustion that a certain amount of energy may be produced to accomplish a stated quantity of work. The importance of a reconstructive dietary for the defective class whom I have subjected to physical training is beyond question. An ideal dietary is one which in addition to furnishing energy requisite for the duties of the passing hour is rich in and capable of supplying those elements the subject is most deficient in and which his body stands the most in need of. But this I must confess I have not found as yet; and until I or some co-worker supply this missing link, the triality of physical training, exercise for structural amplification and harmony, the bath and massage for organic excellence and diet that the subject may be fed, will be more complete in theory than perfect in application.

For the initial class of 1886 the corridor was the exercising room and a few pairs of dumb bells comprised the apparatus. The exercises were almost entirely what is known as the setting up drill. Twelve of the most stupid, illiterate, unimpressionable,

ox-like men were selected to see what change of habit and characteristic could be brought about by treatment of the corporal parts.

It is not necessary to describe at length the plan pursued, but suffice it to say that for five months these twelve men were exercised and washed, grooming best and most tersely expresses the treatment they received, and then returned to shop and task under conditions they previously had not been equal to. For a corresponding time they were watched and noted under the stress of discipline and requirement of task to determine whether the improvement, the resultant of the stimulus applied, would with the removal of the latter pass away; or remaining, mark an era of improvement in their embarrassed lives. The latter proved to be the case as in school, labor, and demeanor, their percentage for the five months after was greater than for five months preceding their drill and manipulation.

And another class was formed and treated in a similar manner. The third class was selected for physical and mental deficiencies and an abandoned shop used as a gymnasium. With this class began the use of apparatus in a limited way. We constructed a jumping board, horizontal and parallel bars, that a spirit of competition might be aroused, holding all to a better performance of their work. When the weather permitted foot racing took place in the yard and free exercises likewise there performed: And in this manner the work of physical training as a purely educational measure was brought about, and meeting with a favorable reception an appropriation was asked from the Legislature for greater facilities and obtained.

On the 15th of May, 1889, ground was broken for a bath-house and gymnasium and the work progressed as best an inclement season would allow until March 20th, of the present year, when the gymnasium was informally opened with a few class exercises before a small audience of interested friends who had watched step by step the progress of our work.

The outside measurements of the building are 90 by 140 feet. It is of brick, slate roofed, with eight large dormer windows in the roof in addition to numerous side and end windows affording abundant light and proper ventilation. At one end of the building is the bath-house occupying a space about 40 by 85 feet in the clear, divided into six compartments.

In order comes first the measuring room, 18 by 20 feet, supplied

with scales, measuring rods, hand, back and leg dynamometers, and other appliances to note the strength and development of the patient, if I may use the term. Communicating with this is the dressing and drying room with compartments for the gymnasium dress which is assumed when the class enters the building and laid aside when the men pass out. Next comes the shampooing room, 18 by 20 feet, with four tables that as many men may be treated simultaneously. Over each table is a hot and cold spray and douche and a fifth against the wall. The floor from the four corners slopes to a catch basin in the centre that superfluous water may be carried off. Then the warm room, 18 by 20, with a temperature of from 130 to 150 F. as may be desired. In the centre of the room is a plunge, 4 by 6, containing four feet of water.

The plunge is surrounded on two sides by a brass railing, while at either end is a ladder of the same material to facilitate the egress of those who are too clumsy to clamber up the sides. On each side of the room are seats arranged in tiers of three, one above the other, amphitheatre like, where the men sit and exude the sin, original and otherwise, that is in them.

Opening off from the warm room is the hot room of same dimensions as the former and capable of an atmosphere of from 180 to 200 F. It lacks the plunge but in other respects resembles the warm room.

The room containing the swimming bath is 16 by 50 feet. The tank is 12 by 42, and has a sloping bottom that allows of four and five feet of water at its respective ends, its capacity being estimated at 25,000 gallons. By means of a pipe perforated by minute holes and traversing the length of the tank upon its bottom, and through which steam can be sent, it is possible to raise the temperature of the water to 70 F. or higher. The swimming tank like the smaller plunge is surrounded by a railing and provided with ladders. The walls of the bath-house are of brick, rubbed down and painted white; while the floors of the various rooms together with the sides and bottoms of the tanks are Vermont marble, a material more expensive than cement which could have been employed, but is not comparable to marble in appearance and the sense of cleanness it conveys.

The space above the bath-house is a gallery that overlooks without obstruction the gymnasium proper.

The gymnasium approximates 85 by 95 feet, giving in round numbers 8,000 square feet of floor surface free from post, pillar,

and incumbrance of any kind. The roof is an open truss painted a neutral tint and the ceiling, Georgia pine. Suspended from the trusses and supported by the walls is a running track four feet in width and eleven feet above the floor, and extending around the room. The distance from floor to ceiling along the lateral walls is twenty-one feet, and from floor to peak is forty-two. The floor is of pine, treated with oil and shellac.

The developing apparatus is such as is commonly employed in any all-round gymnasium, save that for prudential reasons, the trapeze has been omitted. Chest-weights are placed along the wall and stationary fixtures so arranged that by rope and tackle-block, in an instant, they can be lifted out of place, allowing the clearing of the floor for purposes of class drill with dumb-bells, Indian clubs, wands, and staffs.

The building with plant of bath and apparatus complete cost between \$15,000 and \$16,000, to which must be added estimated cost of labor, which is not considered, as at the time of construction most of the inmates were in idleness and their time was charged to maintenance account.

At the present time the class consists of eighty boys and young men of from sixteen to twenty-nine years of age. It includes epileptics, moral imbeciles, some that in physiognomy and gait are prototypes of those over whom my friend Dr. Kerlin exercises custodial care, the dwarfed and stunted product of city tenement and lodging house, and the bucolic, sensuous in tastes and blunted in perceptions.

The boy who knew neither the name of days nor months and dated an epoch in his life from "the time the snow went off the ground;" the girl-boy, effeminate in features and soft of voice, ignorant of the county and the State in which he lived, whose play-mates were his sister's companions and her dolls, because the boys made fun of him upon the streets; the youth not far removed from feeble-mindedness and with the embarrassed locomotion the mentally deficient so often have; the crank with peculiar notions of his own importance and inclined to disobey; foundlings cast adrift upon the world to starve or live as best they might; the dullard in the school; the moral imbecile who lies and steals and tortures whom he can and sees no error in the acts that yield him what he wants; those attenuated through insufficient nourishment, uncertain habitation, and disease; the little tyrant who ruled a widowed mother with despotie sway and filched her hard earned

wages to minister to his factitious wants: are all types of those included in the class.

The conditions considered in selection are physical deterioration from whatsoever cause, inability to maintain progressive standing in the schools, and ethical departures when there is reason for assuming the same to be dependent upon a body whose parts are ill-adjusted and out of line.

The class is divided into sections A, B and C, with a time schedule as follows :

Section A, Gymnasium work—Monday, Wednesday and Friday, 7.30 to 9.30 A. M., Tuesday, Thursday and Saturday, 7.30 to 11, A. M.; Bathing—Monday, Wednesday and Friday, 9.30 till noon; Drawing School—Tuesday, Thursday and Saturday, 11 till noon; Trades School—Monday, Tuesday, Thursday and Friday, 1 to 4 P. M.

Section B, Gymnasium work—Tuesday, Thursday and Saturday, 7.30 to 9.30 A. M., Monday, Wednesday and Friday, 7.30 to 11 A. M.; Bathing—Tuesday, Thursday and Saturday, 9.30 till noon; Drawing School—Monday, Wednesday and Friday, 11 till noon; Trades School—Monday, Tuesday Thursday and Friday, 1 to 4 P. M.

Section C, Gymnasium Work—Monday, Tuesday, Thursday and Friday, 1 to 4 P. M.

Calisthenics and free movements for the three sections, Wednesday and Saturday, 1 to 4 P. M.

From the above it will be seen that manual training and drawing are incorporated in the educational scheme in vogue in the treatment of dullard and non-responsive types.

There are some who primarily are too dense and stupid for manual training. Such as these are in the beginning treated by physical means alone until such a time as there shall come a degree of mental opening and responsiveness to other stimuli. The trades school possesses an educational value, a mental discipline and strengthening for deficient, by instructing them in habits of precision overcoming the careless and crude form that characterized their previous manual efforts. It develops their latent sense of form besides uniting the eye and the muscles of the arm and hand in associated action.

I would not be understood as advocating physical training as a panacea for every ill of body, mind and morals. But in the re-adjustment of certain dullards and illiterates I cannot regard it other than a mistake to attempt primarily to impress the mind. A season

of physical education, with a discipline that holds each man to his work, requiring him to do it well, develops qualities of attention, activity, and obedience, and marks a state of beginning intellection.

Mindful ever of the law of a natural limitation, and the fact that education is restricted within certain limits, it is not assumed that physical training or any other educational process will transform a being into any thing other than what he was capable of becoming through the endowments he originally received at the hand of nature.

The Elmira conception of physical training is that the cultivation of corporal excellence by renovating tissues will manifest itself in improved nutrition and increase of organic power, an elaborated physical basis, conditions that favor and render possible the minimizing of the subject's asserting bad and the bringing to light his latent good of mind and morals, which would never have been developed voluntarily and of his own free will had he continued on in his embarrassment of body and environment.

With this idea, and for the defective classes named, the gymnasium is but a preparatory and training school for those of trades and letters.

